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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,945	01/29/2004	Carl Dietz McCrosky	PAT 2238A-2 US	1829
26123 7590 08/07/2007 BORDEN LADNER GERVAIS LLP WORLD EXCHANGE PLAZA 100 QUEEN STREET SUITE 1100 OTTAWA, ON K1P 1J9 CANADA			EXAMINER LEE, BETTY E	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 08/07/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/765,945	Applicant(s) MCCROSKY ET AL.	
	Examiner Betty Lee	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 23-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-20, 24, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 14, 21, 23 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 18, 26, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 1, 18, and 26 recite the limitation "said group of destinations" in line 7.

There is insufficient antecedent basis for this limitation in the claim.

Claim 27 is rejected as being dependent on a rejected base claim.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **1, 9, 18, and 19** are rejected under 35 U.S.C. 102(e) as being anticipated by Smith (US 6,188,686).

**Regarding claims 1 and 18**, Smith teaches at least one grain select block for selecting and storing specific data (see Fig. 6 Box 88), said specific data being

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propagated to a subset of destinations within the plurality of destinations (see Fig. 6 Box 84), each grain select block containing fanout information for propagating said specific data to the group of destinations (see Fig. 6 Box 88);

at least one data disable block for providing a data connection from said source to said at least one grain select block based on the fanout information, the at least one data disable block receiving the data from the source (see Fig. 6 Box 88);

wherein the specific data is propagated over a pre-defined interval of time from the at least one data disable block to the at least one grain select block (see col. 13 lines 51-60; The data is propagated during a switching cycle.).

**Regarding claim 9**, Smith teaches a plurality of data disable blocks for fanout of ingress data grains to at least one of the plurality of egress ports see (Fig. 6 Box 88), each data disable block having:

a data disable control memory (see Fig. 11 Box 118); and

a plurality of data storage devices being coupled to the data disable control memory (see Fig. 11 Box 82), each data storage device of the plurality data storage devices propagating a particular ingress data grain to a particular egress port group and enabling propagation of the particular ingress data grain based on information stored in the data disable control memory (see Fig. 11 Box 82); and

where the data disable control memory is connected to the plurality of data storage devices (see Fig. 11 Box 118).

**Regarding claim 19**, Smith teaches

- a) grouping a plurality of egress ports into at least two egress port groups (see col. 26 lines 21-28);
- b) disabling the propagation of the ingress data to at least one egress port group of the at least two egress port groups (see col. 26 lines 29-37);
- c) defining egress data based on a predefined selection of the ingress data by at least one egress port group being enabled for propagation of the ingress data (see col. 27 lines 21-31); and
- d) storing the egress data and the ingress data for output to the corresponding egress port (see Fig. 14 Box 362).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2, 3, 4-6, 8, 10-12, 17, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 6,188,686) in view of Beshai et al. (US 2005/0063370).

**Regarding claim 2**, Smith teaches a plurality of grain select blocks for selecting and storing a plurality of ingress data grains (see Fig. 2 Boxes 8<sub>1</sub> and 8<sub>2</sub>), each grain select block having:

a connection memory having memory contents defining an egress data grain at a corresponding grain select block (see Fig. 6 Box 88);

a multiplexer having a time-division multiplexing function (see col. 26 lines 21-28);

a data storage device for storing output (see Fig. 6 Box 86) received from the multiplexer (see Fig. 6 Box 84); and

means for outputting the egress data grain from the data storage device to the plurality of egress ports (see Fig. 1 Box 6). Smith teaches all the subject matter of the claimed invention with the exception of a data grain defined by a timeslot.

However, Beshai teaches the egress data grain being defined by a pre-selected ingress port and a pre-selected timeslot of the plurality of ingress data grains (see paragraph 52 lines 4-17); and

a multiplexer for selecting a particular ingress data grain based on the pre-selected ingress port and the pre-selected timeslot in the connection memory (see paragraph 53 lines 13-18). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Beshai in the system of Smith. The motivation for doing so is to make the system more efficient.

**Regarding claim 3,** Smith teaches a plurality of ingress ports for transmitting a plurality of ingress data grains (see Fig. 1 Box 4);

a plurality of egress ports for receiving a plurality of egress data grains, the plurality of egress ports forming at least two egress port groups (see Fig. 1 Box 6);

a plurality of egress selection switch blocks for selecting and storing the plurality of ingress data grains (see Fig. 6 Box 88), each egress selection switch block containing a plurality of grain select blocks having:

a connection memory having memory contents defining an egress data grain at a corresponding grain select block (see Fig. 6 Box 88);

a multiplexer having a time-division multiplexing function (see col. 26 lines 21-28);

a data storage device for storing output (see Fig. 6 Box 86) received from the multiplexer (see Fig. 6 Box 84); and

means for outputting the egress data grain from the data storage device to the plurality of egress ports (see Fig. 1 Box 6). Smith teaches all the subject matter of the claimed invention with the exception of a timeslot counter and a data grain defined by a timeslot.

However, Beshai teaches a timeslot counter for identifying a particular timeslot number for each ingress data grain of the plurality of ingress data grains (see paragraph 53 lines 13-18);

the egress data grain being defined by a pre-selected ingress port and a pre-selected timeslot of the plurality of ingress data grains (see paragraph 52 lines 4-17); and

a multiplexer for selecting a particular ingress data grain based on the pre-selected ingress port and the pre-selected timeslot in the connection memory (see paragraph 53 lines 13-18). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Beshai in the system of Smith. The motivation for doing so is to make the system more efficient.

**Regarding claim 4**, Smith further teaches synchronizing to a clock pulse (see Fig. 8 "CLK").



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**Regarding claim 5**, Smith further teaches the grain select block further includes a microprocessor interface for updating contents of the connection memory (see Fig. 11 Box 118).

**Regarding claim 6**, Smith further teaches the plurality of ingress ports is aligned with a time division multiplex channel of ingress data grains (see col. 26 lines 21-28).

**Regarding claim 8**, Smith further teaches the switch is embodied in an integrated circuit chip (see col. 26 lines 58-59).

**Regarding claim 10**, Smith teaches a plurality of ingress ports for transmitting a plurality of ingress data grains (see Fig. 1 Box 4);

a plurality of egress ports for receiving a plurality of egress data grains, the plurality of egress ports forming at least two egress port groups (see Fig. 1 Box 6);

a plurality of data disable blocks for fanout of ingress data grains to at least one of the plurality of egress ports see (Fig. 6 Box 88), each data disable block having:

a data disable control memory (see Fig. 11 Box 118); and

a plurality of data storage devices being coupled to the data disable control memory (see Fig. 11 Box 82), each data storage device of the plurality data storage devices propagating a particular ingress data grain to a particular egress port group and enabling propagation of the particular ingress data grain based on information stored in the data disable control memory (see Fig. 11 Box 82);

where the data disable control memory is connected to the plurality of data storage devices (see Fig. 11 Box 118); and

a time-division multiplexing function (see col. 26 lines 21-28). Smith teaches all the subject matter of the claimed invention with the exception of a timeslot counter and a data grain defined by a timeslot.

However, Beshai teaches a timeslot counter for identifying a particular timeslot number for each ingress data grain of the plurality of ingress data grains (see paragraph 53 lines 13-18); and

where the timeslot counter is coupled to the control memory. The disable function is coupled to the controller in the system of Smith. Thus, it would have been obvious to one of ordinary skill to use the system of Beshai in the system of Smith. The motivation for doing so is to make the system more efficient.

**Regarding claim 11**, Smith further teaches where the information stored in the data disable control memory is data bit information (see Fig. 11 Box 118).

**Regarding claim 12**, Smith further teaches the grain select block further includes a microprocessor interface for updating contents of the connection memory (see Fig. 11 Box 118).

**Regarding claim 17**, Smith further teaches a plurality of grain select blocks for selecting and storing the plurality of ingress data grains received from the plurality of data disable blocks (see Fig. 14 Box 36), and a system for outputting a pre-defined egress data grain to one of the plurality of egress ports, where the plurality of grain select blocks are coupled to the plurality of data disable blocks (see Fig. 13 Boxes 8 and 36).

**Regarding claim 24**, Smith teaches a plurality of grain select blocks for selecting and storing a plurality of ingress data grains (see Fig. 2 Boxes 8<sub>1</sub> and 8<sub>2</sub>), each grain select block having:

a connection memory having memory contents defining an egress data grain at a corresponding grain select block (see Fig. 6 Box 88);

a multiplexer having a time-division multiplexing function (see col. 26 lines 21-28);

a data storage device for storing output (see Fig. 6 Box 86) received from the multiplexer (see Fig. 6 Box 84);

means for outputting the egress data grain from the data storage device to the plurality of egress ports (see Fig. 1 Box 6); and

where the connection memory having decode logic to generate a signal from the each grain select block for selectively enabling and disabling fanout of the plurality of ingress data grains (see Fig. 7 Box 88). Smith teaches all the subject matter of the claimed invention with the exception of a data grain defined by a timeslot.

However, Beshai teaches the egress data grain being defined by a pre-selected ingress port and a pre-selected timeslot of the plurality of ingress data grains (see paragraph 52 lines 4-17); and

a multiplexer for selecting a particular ingress data grain based on the pre-selected ingress port and the pre-selected timeslot in the connection memory (see paragraph 53 lines 13-18). Thus, it would have been obvious to one of ordinary skill in

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the art to use the system of Beshai in the system of Smith. The motivation for doing so is to make the system more efficient.

7. Claims **7, 13, 15, and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 6,188,686) in view of Beshai et al. (US 2005/0063370) as applied to claims 3 and 12 above, and further in view of Ohyama et al. (US 2002/0070759).

**Regarding claims 7, 13, and 15**, Smith teaches all the subject matter of the claimed invention with the exception of the data storage device is a data flip flop. However, Ohyama teaches a data storage device is a data flip flop (see paragraph 16 lines 8-17). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Ohyama in the system of Smith. The motivation for doing so is to reduce power consumption.

**Regarding claim 16**, Smith teaches all the subject matter of the claimed invention with the exception of a clock gating circuit. However, Ohyama teaches a clock gating circuit. Thus, it would have been obvious to one of ordinary skill in the art to use the system of Ohyama in the system of Smith. The motivation for doing so is to reduce power consumption.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 6,188,686) in view of Alpert et al. (US 6,044,209).

**Regarding claim 20**, Smith teaches

- a) grouping a plurality of egress ports into at least two egress port groups (see col. 26 lines 21-28);
- b) generating signals containing a predefined data selection for propagation, from the egress side to the ingress side (see Fig. 13 Box 20)
- c) disabling the propagation of the ingress data to at least one egress port group of the at least two egress port groups (see col. 26 lines 29-37);
- d) defining egress data based on a predefined selection of the ingress data by at least one egress port group being enabled for propagation of the ingress data (see col. 27 lines 21-31); and
- e) storing the egress data and the ingress data for output to the corresponding egress port (see Fig. 14 Box 362).

Smith teaches all the subject matter of the claimed invention with the exception of a fanout tree. However, Alpert teaches a fanout tree (see col. 6 lines 47-54). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Alpert in the system of Smith. The motivation for doing so is to make the system more efficient by distributing a logic signal from a single input to multiple outputs.

***Allowable Subject Matter***

9. Claims **14, 21, 23, and 25** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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10. Claims **26 and 27** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Collins (US 4,701,907) and Kamiya et al. (US 2007/0115958) are all cited to show systems which are considered pertinent to the claimed invention.

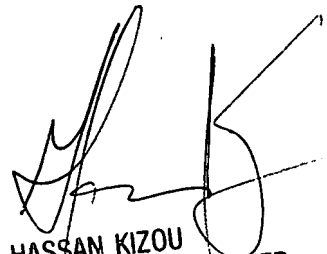
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betty Lee whose telephone number is (571) 270-1412. The examiner can normally be reached on Monday-Thursday 9-5 EST and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to be "B. L." followed by a long horizontal stroke.A handwritten signature in black ink, appearing to be "H. K." followed by a large loop and a horizontal stroke.

HASSAN KIZOU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600